NPDES Permit No. IL0000108
Notice No. SMT:15070201.smt

Public Notice Beginning Date: **August 31, 2015**

Public Notice Ending Date: **September 30, 2015**

National Pollutant Discharge Elimination System (NPDES)
Permit Program

Draft Reissued NPDES Permit to Discharge into Waters of the State

Public Notice/Fact Sheet Issued By:

Illinois Environmental Protection Agency
Bureau of Water,
Division of Water Pollution Control
Permit Section
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276
217/782-0610

Name and Address of Discharger:

Illinois Power Generating Company
Water and Waste Permitting / Environmental Compliance
1500 Eastport Plaza Drive
Collinsville, Illinois 62234

Name and Address of Facility:

Coffeen Power Station
134 CIPS Lane
Coffeen, Illinois 62017
(Montgomery County)

The Illinois Environmental Protection Agency (IEPA) has made a tentative determination to issue a NPDES permit to discharge into the waters of the state and has prepared a draft permit and associated fact sheet for the above named discharger. The Public Notice period will begin and end on the dates indicated in the heading of this Public Notice/Fact Sheet. The last day comments will be received will be on the Public Notice period ending date unless a commentor demonstrating the need for additional time requests an extension to this comment period and the request is granted by the IEPA. Interested persons are invited to submit written comments on the draft permit to the IEPA at the above address. Commentors shall provide his or her name and address and the nature of the issues proposed to be raised and the evidence proposed to be presented with regards to those issues. Commentors may include a request for public hearing. Persons submitting comments and/or requests for public hearing shall also send a copy of such comments or requests to the permit applicant. The NPDES permit and notice number(s) must appear on each comment page.

The application, engineer's review notes including load limit calculations, Public Notice/Fact Sheet, draft permit, comments received, and other documents are available for inspection and may be copied at the IEPA between 9:30 a.m. and 3:30 p.m. Monday through Friday when scheduled by the interested person.

If written comments or requests indicate a significant degree of public interest in the draft permit, the permitting authority may, at its discretion, hold a public hearing. Public notice will be given 45 days before any public hearing. Response to comments will be provided when the final permit is issued. For further information, please call Shu-Mei Tsai at 217/782-0610.

The applicant operates an existing coal fired steam electric generating station (SIC 4911) which generates approximately 1000 MW. Cooling and service water for the power station is provided by Coffeen Lake which occupies 1100 acres. Once through cooling systems are used to cool the main condensers of each unit and condenser cooling water is discharged from the units to Coffeen Lake for dissipation of waste heat via flume. Service water is used for once through cooling, make-up to the bottom ash recycle pond (approximately 23 acres) and the water treatment plant and for other miscellaneous uses. A municipal water supply is utilized for sanitary use and make-up to the water treatment plant.

Plant operation results in an average discharge of 0.144 MGD of condenser cooling water discharge flume from outfall 001; 527.69 MGD of condenser cooling water diversion channel overflow from outfall 020, 37.97 MGD of supplemental cooling pond discharge from outfall 021, 85.35 MGD of supplemental cooling tower discharge from outfall 022, an intermittent discharge of boiler draining wastewater from outfall A01, 0.39 MGD of raw water treatment and demineralizer regenerant waste from outfall B01, an intermittent discharge of unit 1 floor drains/sumps and stormwater from outfall C01, 0.0085 MGD of sanitary from outfall D01, an intermittent discharge of unit 2 floor drains/sumps and stormwater from outfall E01, an intermittent discharge of equalization tank bypass line discharge from outfall G01 which occurs during maintenance of the equalization tank, an intermittent discharge of storm water runoff from southwest corner of the

closed ash pond from Outfall H01, an intermittent discharge of stormwater from the southeast corner of the closed ash pond from Outfall I01, an intermittent discharge of chemical metal cleaning wastes from outfall J01, 0.6 MGD of coal yard settling pond and emergency overflow discharge from outfall 002, an intermittent discharge of intake screen backwash from outfall 003; an intermittent discharge of rail spur storm water runoff from outfalls 008-016; an intermittent discharge of storm water runoff associated with an ash landfill from outfall 018; and an intermittent discharge of WFGD Reclaim pond emergency overflow from outfall 023.

The following modifications are proposed:

1. The permittee name and address has been changed.
2. Outfall 015 is not a point source and was removed.
3. Added chemical metal cleaning waste as contributory wastestream #18 to Outfalls 001, 020, 021, and 022 on Page 2 of the permit. Chemical metal cleaning wastes are authorized to be discharged to the recycle pond by special condition 11 of the current permit. The recycle pond normally does not discharge. If an overflow event occurs the water discharges to the discharge flume tributary to Outfalls 001, 020, 021, and 022. This change is to recognize that discharges of chemical metal cleaning waste may occur and are authorized.
4. The existing discharge of chemical metal cleaning wastes will be regulated by newly designated internal outfall J01 because it is a regulated wastestream in the Steam Electric Effluent Guideline and BPT limits must be met prior to dilution with other wastestreams.
5. Added new Outfall 023 for overflow discharge from the gypsum recycle pond. Also, see Page 8 of the Public Notice/fact Sheet.

Application is made for the existing discharge(s) which are located in Montgomery County, Illinois. The following information identifies the discharge point, receiving stream and stream classifications:

Outfall	Receiving Stream	Latitude	Longitude	Stream Classification	Biological Stream Characterization
001	Coffeen Lake	39° 03’ 35” North	89° 23’ 28” West	General Use	Not Rated
002	Coffeen Lake	39° 03’ 19” North	89° 24’ 20” West	General Use	Not Rated
003	Coffeen Lake	39° 03’ 36” North	89° 24’ 18” West	General Use	Not Rated
008	Coffeen Lake	39° 03’ 17” North	89° 23’ 57” West	General Use	Not Rated
009	Coffeen Lake	39° 03’ 17” North	89° 23’ 56” West	General Use	Not Rated
010	Coffeen Lake	39° 03’ 13” North	89° 23’57” West	General Use	Not Rated
011	Coffeen Lake	39° 02’ 56” North	89° 23’ 55” West	General Use	Not Rated
012	Coffeen Lake	39° 02’ 50” North	89° 23’ 47” West	General Use	Not Rated
013	Coffeen Lake	39° 02’ 38” North	89° 23’ 40” West	General Use	Not Rated
014	Coffeen Lake	39° 02’ 32” North	89° 23’ 38” West	General Use	Not Rated
016	Coffeen Lake	39° 03’ 39” North	89° 24’ 18” West	General Use	Not Rated
018	Coffeen Lake	39° 03’ 55” North	89° 24’ 21” West	General Use	Not Rated
020	Coffeen Lake	39° 03’ 34” North	89° 23’ 28” West	General Use	Not Rated
021	Coffeen Lake	39° 03’ 36” North	89° 23’ 23” West	General Use	Not Rated
022	Coffeen Lake	39° 03’ 31” North	89° 23’ 23” West	General Use	Not Rated
023	Coffeen Lake	39° 04’ 46” North	89° 23’ 62” West	General Use	Not Rated

To assist you further in identifying the location of the discharge please see the attached map.

The waterbody segment ROG receiving the discharge from outfall(s) 001, 002, 003, 008, 009, 010, 011, 012, 013, 014, 016, 018, 020, 021, 022, 023 is on the draft 2014 Illinois Integrated Water Quality Report and Section 303(d) List. The receiving water has not been given an integrity rating or been listed as biologically significant in the 2008 Illinois Department of Natural Resources publication *Integrating Multiple Taxa in a Biological Stream Rating System*. The impaired designated uses and pollutants causing impairment are tabulated below:

Designated Uses	Pollutants Causing Impairment
Fish Consumption	Mercury

The discharge(s) from the facility shall be monitored and limited at all times as follows:

	LOAD LIMITS lbs/day DAF (DMF)			CONCENTRATION LIMITS mg/l		
PARAMETER	30 DAY AVERAGE	DAILY MAXIMUM	REGULATION	30 DAY AVERAGE	DAILY MAXIMUM	REGULATION
Outfalls: 001Condenser Cooling Water Discharge Flume (DAF = 0.144 MGD) 020 Condenser Cooling Water Diversion Channel Overflow (DAF = 527.69 MGD) 021 Condenser Cooling Water Supplemental Cooling Pond Overflow (DAF = 37.97 MGD) 022 Condenser Cooling Water Supplemental Cooling Tower Discharge (DAF = 85.35 MGD)						
Flow (MGD)						
pH						35 IAC 302.204
Total Residual Chlorine					0.05	35 IAC 302.208
Temperature						IPCB 09-38
Outfall A01: Boiler Draining Wastewater (Intermittent Discharge)						
Flow (MGD)						
Total Suspended Solids				15.0	30.0	35 IAC 304.124
Oil and Grease				15.0	20.0	40 CFR 423.12(b)(3)
Outfall B01: Raw Water Treatment and Demineralizer Regenerant Wastes (DAF = 0.39 MGD)						
Flow (MGD)						
Total Suspended Solids				15.0	30.0	35 IAC 304.124
Oil and Grease				15.0	20.0	40 CFR 423.12(b)(3)
Outfall C01: Unit 1 Floor Drains/Sumps and Stormwater (Intermittent Discharge)						
Flow (MGD)						
pH						35 IAC 304.125
Total Suspended Solids				15.0	30.0	35 IAC 304.124
Oil and Grease				15.0	20.0	40 CFR423.12(b)(3)
Outfall D01: Sanitary (DAF = 0.0085 MGD)						
Flow (MGD)						
pH						35 IAC 304.125
BOD_5				30	60	35 IAC 304.120(a)
Total Suspended Solids				30	60	35 IAC 304.120(a)
Total Residual Chlorine					0.05	
Fecal Coliform						35 IAC 304.121
Outfall E01: Unit 1 Floor Drains/Sumps and Stormwater (Intermittent Discharge)						
Flow (MGD)						
Total Suspended Solids				15.0	30.0	35 IAC 304.124
Oil and Grease				15.0	20.0	40 CFR423.12(b)(3)
Outfall G01: Equalization Tank Bypass Line Discharge (Intermittent Discharge)						

	LOAD LIMITS lbs/day DAF (DMF)			CONCENTRATION LIMITS mg/l		
PARAMETER	30 DAY AVERAGE	DAILY MAXIMUM	REGULATION	30 DAY AVERAGE	DAILY MAXIMUM	REGULATION
Flow (MGD)						
Total Suspended Solids				15.0	30.0	35 IAC 304.124
Oil and Grease				15.0	20.0	40 CFR 423.12(b)(3)
Outfall J01: Chemical Metal Cleaning Wastes (Intermittent Discharge)						
Flow (MGD)						
pH						35 IAC 304.125
Total Suspended Solids				15.0	30.0	35 IAC 304.124
Oil and Grease				15.0	20.0	40 CFR 423.12(b)(5)
Iron				1.0	1.0	40 CFR 423.12(b)(5)
Copper				0.5	1.0	35 IAC 304.124
Outfall 002: Coal Yard Settling Pond and Emergency Overflow Discharge (Intermittent Discharge)						
Flow (MGD)						
pH						35 IAC 304.125
Total Suspended Solids				15.0	30.0	35 IAC 304.124
Oil and Grease				15.0	20.0	40 CFR 423.12(b)(3)
Iron				2.0	4.0	35 IAC 304.124
Outfall 003: Intake Screen Backwash (Intermittent Discharge)						
Debris collected on intake screens is prohibited from being discharged back to the Lake.						
Outfalls: 008, 009, 010, 011 ,012, 013, 014, and 016 Stormwater Runoff from Rail Spur (Intermittent Discharge) 018 Stormwater Runoff Associated with the Ash Landfill (Intermittent Discharge) H01 Stormwater from Southwest Corner of Closed Ash Pond (Intermittent Discharge) I01 Stormwater from Southwest Corner of Closed Ash Pond (Intermittent Discharge) 023 WFGD Reclaim Pond Emergency Overflow (Intermittent Discharge)						
Stormwater Pollution Prevention Plan						40 CFR 122.26(b)(14)(vii)

The following explain the conditions of the proposed permit:

The permittee was granted thermal relief from the Illinois Pollution Control Board in IPCB Order 09-38 pursuant to 35 Ill. Adm. Code 302.211(j) and Section 316(a) of the Clean Water Act. In accordance with IPCB's order the following limitations and conditions shall apply at the edge of the mixing zone for the condenser cooling water discharge. The edge of the mixing zone shall be a maximum area of 26 acres and compliance with the following thermal limitations determined by a fixed temperature recorder set at the edge of the mixing zone below the surface of the water.

A. The thermal discharge to Coffeen Lake from Coffeen Power Station, located in Montgomery County, shall not result in a temperature, measured at the outside edge of the mixing zone in Coffeen Lake, which:

   1. Exceeds 105 degrees Fahrenheit as a monthly average, from June through September, and a 112 degrees Fahrenheit as a maximum for more than three percent of the hours during that same period.

   2. Exceeds 89 degrees Fahrenheit as a monthly average, from November through April, and 94 degrees Fahrenheit as a maximum for more than two percent of the hours during that same period.

   3. Exceed 96 degrees Fahrenheit as a monthly average, in each of the months of May and October, and 102 degrees Fahrenheit as a maximum for more than two percent of the hours in each of those same months.

B. The permittee must monitor Coffeen Lake during the period May through October for fish mortality. In the event excessive fish mortality occurs during these months, the permittee shall implement appropriate mitigation measures including the following:

1. Notify the Illinois Department of Natural Resources (IDNR) immediately;
2. Maximize operation of the cooling basin and existing cooling towers to reduce thermal temperatures;
3. Make operation revisions to the station's typical dispatch order (e.g. "last on and first off");
4. Reduce nighttime capacity factors;
5. Monitor intake and discharge temperatures and visually inspect intake and discharge areas; and
6. No later than November 15 of each year, document mitigation measures employed during periods of excessive fish mortality.

C. Pursuant to 35 Ill. Adm. Code 302.211(j)(1), all discharges from Coffeen Lake to other waters of the State must comply with the applicable provisions of 35 Ill. Adm. Code 302.211(b) through (e).

D. Pursuant to 35 Ill. Adm. Code 302.211(j)(2), the heated effluent discharges to Coffeen Lake must comply with all applicable provisions of 35 Ill. Adm. Code Subtitle C, Chapter I, except 35 Ill. Adm. Code 302.211 (b) through (e).

The special conditions clarify: flow, pH, temperature, TRC, monitoring location, DMR's, usage of water treatment additives, re-opener, operator requirement, intake structure submittal, PCB's, upset and bypass, metal monitoring, boron mixing zone and stormwater pollution prevention plan requirements.

This facility meets the criteria for establishment of a formal mixing zone for boron discharged from outfall 002 pursuant to 35 IAC 302.102. Compliance with the 1.8 mg/l daily maximum effluent limit will result in compliance with 35 IAC 302.208 boron standard outside of the mixing zone defined as a radius of 100 feet from the end of outfall 002 discharge pipe into Coffeen Lake.

The Agency has determined that the operation of the cooling water intake structure meets the equivalent of Best Technology Available (BTA) in accordance with the Best Professional Judgment provisions of 40 CFR 125.3 based on the information currently available. Special Condition 10 requires the submittal of additional information, and compliance with new federal regulations.

The Coffeen Power Station cooling water intake structure (CWIS) is located on the Coffeen Lake, and has a total design CWIS flow of 890 cubic feet per second (cfs). The CWIS contains six screen bays, two for Unit 1 and four for Unit 2. Trash racks with 4.5-inch clear spacing between the rack bars protect each bay from large floating debris. Within each bay there are two conventional vertical traveling screens (two for Unit 1 and four for Unit 2) that are 10 feet wide with 3/8-inch square woven wire mesh. Unit 1 has two 73,250-gpm circulating pumps and Unit 2 has two 125,500-gpm circulating pumps, resulting in an approximate design, maximum cooling water flow capacity of 399,500-gpm.

Comments Regarding Renewal of Alternative Thermal Limits
Coffeen Power Station - IL0000108 Montgomery County

Pursuant to 35 IAC 106.1180(b), an NPDES permit application for renewal of an alternative thermal effluent limitation must include sufficient information for the Agency to compare the nature of the Permittee's thermal discharge and the balanced, indigenous population of shellfish, fish, and wildlife at the time the Board granted the alternative thermal effluent limitation, and the current nature of the petitioner's thermal discharge and the balanced, indigenous population of shellfish, fish, and wildlife currently extant. As part of the thermal relief granted in Illinois Pollution Control Board (IPCB) Order 2009-R-038, the Permittee was required to conduct annual fish studies for a three year period, beginning in 2010. The following is a summary of the findings from these studies, as well as recommendations for the upcoming permit and future 316(a) Demonstrations to be conducted by the Permittee.

Background

The original owner/operator of Coffeen Power Station (Central Illinois Public Service Company) hired the Illinois Natural History Survey (INHS) to perform studies from 1978-1981 in support of a 316(a) Demonstration. As part of this initial demonstration, INHS addressed the biotic categories recommended by USEPA guidance, including lower trophic levels such as phytoplankton/periphyton, zooplankton, and benthic macroinvertebrates, in addition to fish. The overall effect of thermal discharges on trophic relationships was investigated through fish diet studies and was expressed in terms of fish growth, condition, and reproduction. Following completion of the INHS studies, the IPCB granted site-specific thermal standards which remain in place today, with exception to months of May and October which are now subject to modified limits. The studies performed by INHS conformed to a Type I No Appreciable Harm demonstration under the 1977 USEPA Section 316(a) Draft Guidance document, as Unit 1 and 2 of the facility had been in operation for 13 years and 6 years, respectively, therefore allowing for any thermal impacts on the aquatic community to be observable at the time of study. From 1997-2006, additional studies on Lake Coffeen were conducted by Southern Illinois University-Carbondale (SIUC) in response to a 5-year variance for site-specific thermal standards for the months of May and October which was approved by IPCB on June 5, 1997. In contrast to the earlier studies performed by INHS, the SIUC studies were designed and conducted specifically to monitor the valuable sportfish populations for any adverse impact from the variance. Largemouth bass, bluegill, and channel catfish were selected as study organisms, as the lake was being managed with an emphasis on sportfish to provide recreational opportunities to fishermen. The lake is presently being managed by the Illinois Department of Natural Resources (IDNR) and continues to be managed in a manner to provide a fishery that supports healthy populations of sportfish that are sought out by recreational anglers.

Current 316(a) Demonstration

Given that sportfish are the biotic category that the lake is being managed for, ongoing 316(a) studies have studied the potential negative impacts of increased thermal loadings on sportfish. As part of the thermal relief granted in IPCB Order 2009-R-038, the Permittee was required to conduct annual fish studies from 2010-2012. Eastern Illinois University (EIU) was retained by Ameren to conduct additional studies on Coffeen Lake through a Memorandum of Understanding (MOU) with IDNR. Objectives of the studies included the evaluation of changes in density, age and size structure, condition, growth, and mortality of six targeted sportfish species in Coffeen Lake following the 2010 modification of thermal standards for May and October. The Representative Important Species (RIS) selected included largemouth bass, bluegill, channel catfish, redear sunfish, white crappie, and black crappie. The results of the 2010 surveys serve as an assessment of the indigenous population of fish at the time of the Board granting thermal relief, whereas the 2011-2012 results serve as an assessment of the effects (or lack thereof) of the thermal variance on this population. Results from the 2010-2012 studies did not suggest that increased thermal loadings have altered the sportfish populations in Coffeen Lake. Although body condition (relative weight) was found to decrease for channel catfish and crappie in 2012 compared to 2010 results, largemouth bass body condition increased. The age structure of sportfish populations from 2010-2012 varied, but was not perceived to be outside the norm of the natural cyclical nature of recruitment success across year classes. For example, largemouth bass were found to have reduced recruitment in 2011 and 2012, while recruitment of white crappie, a thermally intolerant species, was found to be highly successful in 2011. Growth across year classes from 2010-2012 was not found to be observably altered for any species. Largemouth bass and white crappie have exhibited fast growth across study years, likely due to an abundance of prey fish and increased water temperatures that are conducive to fast growth.

The Permittee has successfully completed the requirements stipulated in the thermal relief granted in IPCB Order 2009-R-038. Additionally, given that Coffeen Lake is being managed for sportfish with oversight from IDNR, the 2010-2012 studies on sportfish populations in Coffeen Lake are considered sufficient in regards to NPDES permit renewal application requirements of 35 IAC 106.1180(b), which require a demonstration that alternative thermal effluent limitations have not adversely impacted the balanced, indigenous population of shellfish, fish, and wildlife of the affected water body. Based on these findings, I recommend that the alternative thermal effluent limitations in the current NPDES permit be incorporated into the renewed permit.

Consistency with Federal Requirements

The USEPA 316(a) Technical Guidance Manual lists six categories that should be considered when selecting RIS for 316(a) Demonstrations. However, given that Coffeen Lake is being managed for sportfish with oversight from IDNR, the Permittee selected RIS with one category in mind, recreationally important species. Although the 316(a) Manual itself states that "The manual is intended to be used as a general guidance and as a starting point for discussions", and that State Directors "are not rigidly bound by the contents of this document", a study consisting solely of recreationally important species is impractical and not conducive to a successful 316(a) Demonstration. Although not all of the recommended categories may be applicable or practical for every 316(a) Demonstration, three additional RIS categories that should potentially be considered for future Coffeen Lake 316(a) demonstrations include "thermally sensitive" species, "species necessary in the food chain", and "species potentially capable of becoming a localized nuisance". The inclusion of a new RIS from the "species necessary in the food chain" has previously been suggested by USEPA, as outlined in the September, 2011 letter from Tinka Hyde to Marcia Willhite. Among USEPA's concerns voiced in this letter was the question of whether

increased lake temperatures could impact forage species due to changes in spawning behavior, and increased predation at significant life stages by top predators due to increased growth of forage fish and predators. Although a direct study on forage species was not incorporated into the 2010-2012 EIU studies, insight into the balance and health of lower trophic levels may be ascertained through the successful recruitment of recent year classes of sportfish species and health body condition (relative weight) of these species. An evaluation of the balance and health of lower trophic levels was provided by the Permittee in the form of the June 30, 3014 document entitled "Lower Trophic Level Impacts of a Modified May and October Thermal Standard for Coffeen Lake", prepared by ASA Analysis and Communication, Inc. The document concluded that recruitment of recent year classes of predatory species have indicated successful reproduction and survival, and rapid growth rates have been maintained, implying that the lower trophic levels in Coffeen Lake have continued to supply an ample food base for top predators. The Agency agrees with this assertion and believes the information provided by the Permittee has sufficiently demonstrated that the thermal relief has not adversely impacted lower trophic levels. However, the Agency recognizes the shortcomings of studies focusing solely on sportfish, and therefore requests that future demonstrations on the balanced, indigenous populations of aquatic life be expanded as suggested below.

Recommendations

While the Agency finds that the Permittee has met IPCB requirements and the NPDES permit renewal application requirements of 35 IAC 106.1180(b), the 316(a) Demonstration is not entirely consistent with the 316(a) Manual guidance and the overall intent of Federal requirements, which is assure the protection and propagation of the waterbody's balanced, indigenous population of shellfish, fish and wildlife (which is not limited solely to sportfish). If the Permittee is to retain the alternative thermal effluent limitations in the upcoming NPDES permit renewal, the plan of study for the upcoming 316(a) Demonstration must be amended with the following provisions.

1. Annual Monitoring: The recent 316(a) Demonstration study only spanned three years, with the first year of sampling occurring after the IPCB approved the increased thermal limits, and the remaining two years of studies being conducted in subsequent years. Other than fish kills or other acute, clearly observable impacts due to increased thermal loads, adverse effects from the increased thermal limits are not expected to become evident in such a short period of time. Population level changes resulting from increased thermal loadings, such as a shift to thermally tolerant organisms, altered recruitment of sportfish or forage fish, or changes in age/growth and body condition, would take several years to manifest themselves. Future 316(a) Demonstrations should continue to annually study Coffeen Lake from May through October using the methods and study designs from the 2010-2012 studies so as to monitor the health of sportfish populations and potentially detect any population level changes in age/growth, condition, density, and mortality of the RIS species.
2. Increased RIS Categories: In addition to the continuation of sportfish studies outlined above, the selection of study organisms should be expanded or modified to include fish from additional RIS Categories. Species selected for representation of these additional RIS categories should be studied in a similar manner to the previous sportfish studies conducted by EIU from 2010-2012. Potential RIS categories and study organisms are provided below.
    a. Thermally Sensitive Species: Although currently being studied due to their recreational importance, white crappie and black crappie are recognized as being thermally intolerant and may therefore be considered suitable candidates for the "thermally sensitive" category. Thus, no additional study organisms may be required to address this RIS category.
    b. Species Necessary in the Food Chain: USEPA previously voiced concerns over whether increased lake temperatures could impact forage species due to changes in spawning behavior, and increased predation at significant life stages by top predators due to increased growth of forage fish and predators. Previous studies at Coffeen Lake found that gizzard shad were the preferred prey species for largemouth bass, therefore the study of gizzard shad populations would be a useful tool in assessing the health of lower trophic levels towards fulfillment of this category.
    c. Species Potentially Capable of Becoming a Localized Nuisance: Given that this RIS category was not specifically studied in past 316(A) Demonstrations at Coffeen Lake, an assessment of "species potentially capable of becoming a localized nuisance" may not be possible. However, should sufficient historical data from a suitable organism become available (e.g., common carp), this additional RIS category should be incorporated into future 316(a) Demonstrations.
3. Continuation of Special Condition 4 : Special Condition 4 of the Permittee's existing NDPES permit was required via the IPCB Order 09-38 and should remain a requirement in the upcoming NPDES permit renewal. Provisions 1 and 2, listed above, should be included within this Special Condition. Additionally, a requirement to provide the Agency with a revised plan of study for the 316(a) Demonstration should be included within this Special Condition. The Permittee shall be afforded 60 days from the effective date of the permit to submit this study plan and shall begin fulfillment of the study plan immediately following Agency approval.

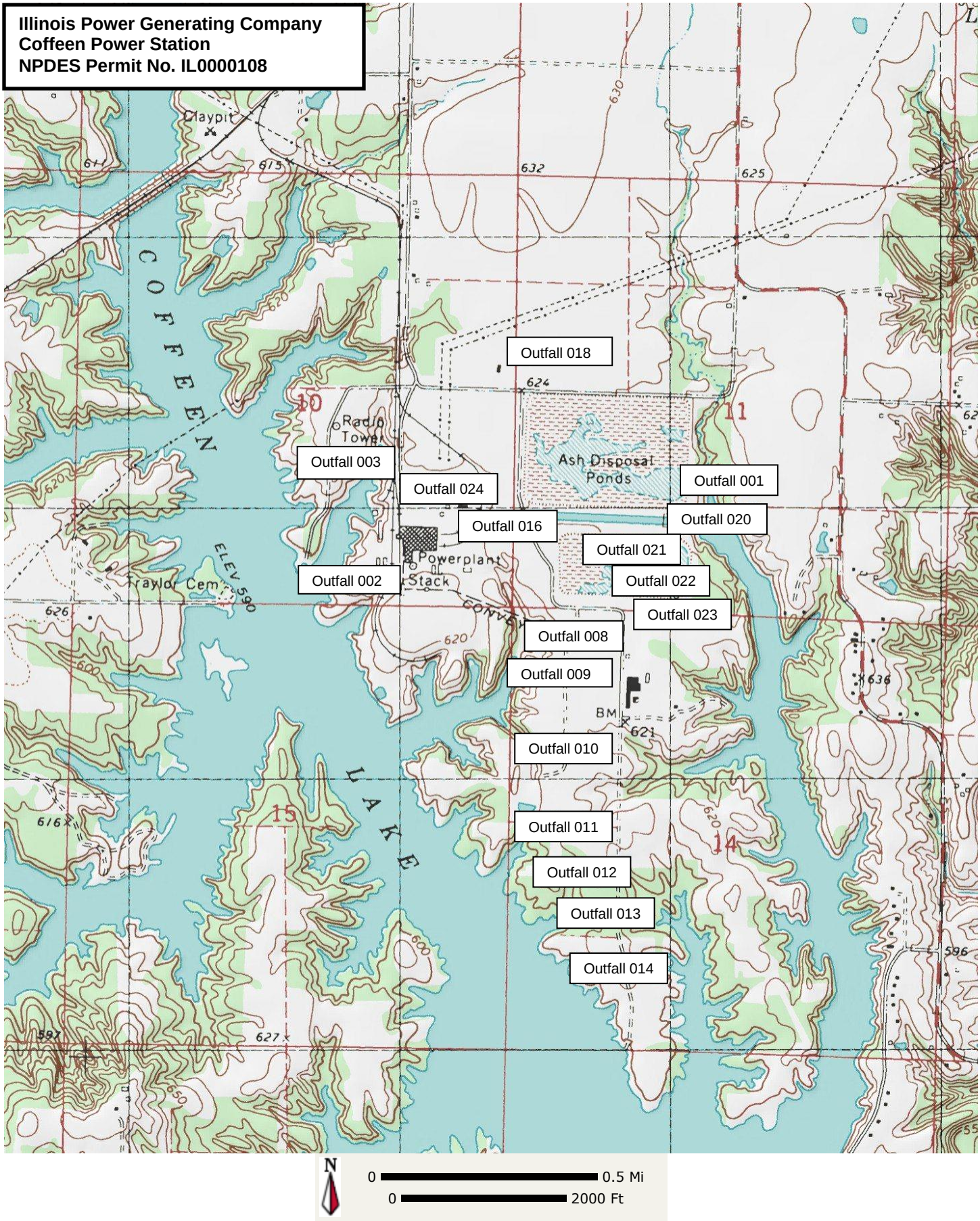
Antidegradation Assessment Review for Ameren Coffeen Power Station
NPDES No. IL0000108 Montgomery County

The facility has discovered that an overflow discharge is possible from the gypsum recycle pond. No outfall is currently recognized from this source in the permit. In the event of a very heavy rainstorm, or if pumps failed and water was not sent back to the air scrubbers, an overflow could occur from the gypsum recycle pond. It is believed that such a discharge event has not yet occurred and that the probability of a future occurrence is somewhat slim. Outfall 023 has been proposed. An unnamed tributary of Coffeen Lake will receive the effluent should it ever occur.

Coffeen Lake (segment code ROG) is listed as impaired on the draft 2014 Illinois Integrated Water Quality Report and Section 303(d) List for fish consumption use. The cause given for fish consumption use impairment is mercury. Aquatic life and aesthetic quality uses are fully supported. A TMDL has been completed for Coffeen Lake. Coffeen Lake is not given an integrity rating in the 2008 Illinois Department of Natural Resources Publication *Integrating Multiple Taxa in a Biological Stream Rating System*. Coffeen Lake is not designated as an enhanced water pursuant to the dissolved oxygen water quality standard.

The antidegradation standard at 35 Ill. Adm. Code 302.105(d) Activities Not Subject to Further Antidegradation Review has a provision for “Short-term, temporary (i.e., weeks or months) lowering of water quality”. The discharge of gypsum recycle pond water due to a storm event of infrequent recurrence or a pump failure that will occur while the pump is put back in service fits the definition of short-term or temporary. No further antidegradation review is necessary.

These recommendations reflect a water quality standards perspective only and should not be construed as indicative of all factors that must be taken into consideration by the permit writer.


Illinois Power Generating Company
Coffeen Power Station
NPDES Permit No. IL0000108
Outfall 018
Outfall 003
Outfall 024
Outfall 001
Outfall 016
Outfall 020
Outfall 021
Outfall 002
Outfall 022
Outfall 023
Outfall 008
Outfall 009
Outfall 010
Outfall 011
Outfall 012
Outfall 013
Outfall 014
COFFEEN
LAKE
Claypit
Radio Tower
Ash Disposal Ponds
Powerplant
Stack
Taylor Cem.
ELEV 590
CONVEY
BM
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2000 Ft

Public Notice of Draft Permit

Public Notice Number SMT:15070201.smt is hereby given by Illinois EPA, Division of Water Pollution Control, Permit Section, 1021 North Grand Avenue East, Post Office Box 19276, Springfield, Illinois 62794-9276 (herein Agency) that a draft National Pollutant Discharge Elimination System (NPDES) Permit Number IL0000108 has been prepared under 40 CFR 124.6(d) for Illinois Power Generating Company for discharge into Coffeen Lake from the Coffeen Power Station, 134 CIPS Lane, Coffeen, Illinois 62017, Montgomery County.

The applicant operates an existing coal fired steam electric generating station (SIC 4911) which generates approximately 1000 MW. Cooling and service water for the power station is provided by Coffeen Lake which occupies 1100 acres. Once through cooling systems are used to cool the main condensers of each unit and condenser cooling water is discharged from the units to Coffeen Lake for dissipation of waste heat via flume. Service water is used for once through cooling, make-up to the bottom ash recycle pond (approximately 23 acres) and the water treatment plant and for other miscellaneous uses. A municipal water supply is utilized for sanitary use and make-up to the water treatment plant.

Plant operation results in an average discharge of 0.144 MGD of condenser cooling water discharge flume from outfall 001; 527.69 MGD of condenser cooling water diversion channel overflow from outfall 020, 37.97 MGD of supplemental cooling pond discharge from outfall 021, 85.35 MGD of supplemental cooling tower discharge from outfall 022, an intermittent discharge of boiler draining wastewater from outfall A01, 0.39 MGD of raw water treatment and demineralizer regenerant waste from outfall B01, an intermittent discharge of unit 1 floor drains/sumps and stormwater from outfall C01, 0.0085 MGD of sanitary from outfall D01, an intermittent discharge of unit 2 floor drains/sumps and stormwater from outfall E01, an intermittent discharge of equalization tank bypass line discharge from outfall G01 which occurs during maintenance of the equalization tank, an intermittent discharge of storm water runoff from southwest corner of the closed ash pond from Outfall H01, an intermittent discharge of stormwater from the southeast corner of the closed ash pond from Outfall I01, an intermittent discharge of chemical metal cleaning wastes from outfall J01, 0.6 MGD of coal yard settling pond and emergency discharge from outfall 002, an intermittent discharge of intake screen backwash from outfall 003; an intermittent discharge of rail spur storm water runoff from outfalls 008-016; an intermittent discharge of storm water runoff associated with an ash landfill from outfall 018; and an intermittent discharge of WFGD Reclaim Pond emergency overflow from outfall 023.

The application, draft permit and other documents are available for inspection and may be copied at the Agency between 9:30 a.m. and 3:30 p.m. Monday through Friday. A Fact Sheet containing more detailed information is available at no charge. For further information, call the Public Notice Clerk at 217/782-0610.

Interested persons are invited to submit written comments on the draft permit to the Agency at the above address. The NPDES Permit and Joint Public Notice numbers must appear on each comment page. All comments received by the Agency not later than 30 days from the date of this publication shall be considered in making the final decision regarding permit issuance.

Any interested person may submit written request for a public hearing on the draft

If written comments and/or requests indicate a significant degree of public interest in the draft permit, the permitting authority may, at its discretion, hold a public hearing. Public notice will be given 30 days before any public hearing.

NPDES Permit No. IL0000108

Illinois Environmental Protection Agency

Division of Water Pollution Control

1021 North Grand Avenue East

Post Office Box 19276

Springfield, Illinois 62794-9276

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

Reissued (NPDES) Permit

Expiration Date:

Issue Date:
Effective Date:

Name and Address of Permittee:

Illinois Power Generating Company
Water and Waste Permitting / Environmental Compliance
1500 Eastport Plaza Drive
Collinsville, Illinois 62234

Facility Name and Address:

Coffeen Power Station
134 CIPS Lane
Coffeen, Illinois 62017
(Montgomery County)

Discharge Number and Name:		Receiving Waters:
001	Condenser Cooling Water Flume Discharge	Coffeen Lake
020	Condenser Cooling Water Diversion Channel Overflow	Coffeen Lake
021	Condenser Cooling Water Supplemental Cooling Pond Overflow	Coffeen Lake
022	Condenser Cooling Water Supplemental Cooling Tower Discharge	Coffeen Lake
A01	Boiler Draining Wastewater	
B01	Raw Water Treatment and Demineralizer Regenerant Wastes	
C01	Unit 1 Floor Drains and Sumps	
D01	Sewage Treatment Plant Discharge	
E01	Unit 2 Floor Drains and Sumps	
G01	Equalization Tank Bypass Line Discharge	
H01	Stormwater From Southwest Corner of Closed Ash Pond	
I01	Stormwater From Southeast Corner of Closed Ash Pond	
J01	Chemical Metal Cleaning Wastes	
002	Coal Yard Settling Pond and Emergency Overflow Discharge	Coffeen Lake
003	Intake Screen Backwash	Coffeen Lake
008, 009, 010, 011, 012, 013, 014, 016	Storm Water Runoff from Rail Spur	Coffeen Lake
018	Storm Water Runoff Associated with Ash Landfill	Coffeen Lake
023	WFGD Reclaim Pond Emergency Overflow	Unnamed Tributary to Coffeen Lake

In compliance with the provisions of the Illinois Environmental Protection Act, Title 35 of Ill. Adm. Code, Subtitle C and/or Subtitle D, Chapter 1, and the Clean Water Act (CWA), the above-named permittee is hereby authorized to discharge at the above location to the above-named receiving stream in accordance with the standard conditions and attachments herein.

Permittee is not authorized to discharge after the above expiration date. In order to receive authorization to discharge beyond the expiration date, the permittee shall submit the proper application as required by the Illinois Environmental Protection Agency (IEPA) not later than 180 days prior to the expiration date.

Alan Keller, P.E.
Manager, Permit Section
Division of Water Pollution Control

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NPDES Permit No. IL0000108

Effluent Limitations and Monitoring

From the effective date of this permit until the expiration date, the effluent of the following discharge(s) shall be monitored and limited at all times as follows:

	LOAD LIMITS lbs/day DAF (DMF)		CONCENTRATION LIMITS mg/l			
PARAMETER	30 DAY AVERAGE	DAILY MAXIMUM	30 DAY AVERAGE	DAILY MAXIMUM	SAMPLE FREQUENCY	SAMPLE TYPE
Outfalls: 001Condenser Cooling Water Discharge Flume (DAF = 0.144 MGD) 020 Condenser Cooling Water Diversion Channel Overflow (DAF = 527.69 MGD) 021 Condenser Cooling Water Supplemental Cooling Pond Overflow (DAF = 37.97 MGD) 022 Condenser Cooling Water Supplemental Cooling Tower Discharge (DAF = 85.35 MGD)						
This discharge consists of:				Approximate Flow:		
1. Condenser cooling water discharge flume				0.144 MGD		
2. Condenser cooling water diversion channel overflow				527.69 MGD		
3. Supplemental Cooling pond discharge				37.97 MGD		
4. Supplemental Cooling tower discharge				85.35 MGD		
5. Miscellaneous heat exchanger cooling water discharges				48.0 MGD		
6. Boiler draining wastewater				0.075 MGD		
7. Raw water treatment and demineralizer regenerant waste				0.390 MGD		
8. Sewage treatment plant effluent				0.0085 MGD		
9. Maintenance shop oil/water separator discharge				Intermittent		
10. Equalization tank bypass line discharge				Intermittent		
11. Stormwater runoff				Intermittent		
12. Chemical containment area drains				Intermittent		
13. Unit 1 floor and equipment drains				Intermittent		
14. Unit 2 floor and equipment drains				Intermittent		
15. Emergency recycle pond overflow				Intermittent		
16. Stormwater from Southwest Corner of Closed Ash Pond				Intermittent		
17. Stormwater from Southeast Corner of Closed Ash Pond				Intermittent		
18. Chemical Metal Cleaning Wastes				Intermittent		
Flow (MGD)	See Special Condition 1				Daily	Continuous
pH	See Special Condition 2				2/Month	Grab
Total Residual Chlorine	See Special Condition 3			0.2	2/Month	Grab
Temperature	See Special Condition 4				Daily	Continuous Recording

Total residual chlorine shall be sampled 2/month when discharging.

Sampling point for 001, 020, 021 and 022 shall be at a point within the cooling water discharge flume.

Stormwater shall be managed in accordance with special condition 17.

NPDES Permit No. IL0000108

Effluent Limitations and Monitoring

From the effective date of this permit until the expiration date, the effluent of the following discharge(s) shall be monitored and limited at all times as follows:

	LOAD LIMITS lbs/day DAF (DMF)		CONCENTRATION LIMITS mg/l			
PARAMETER	30 DAY AVERAGE	DAILY MAXIMUM	30 DAY AVERAGE	DAILY MAXIMUM	SAMPLE FREQUENCY	SAMPLE TYPE
Outfall A01: Boiler Draining Wastewater (Intermittent Discharge)						
Flow (MGD)	See Special Condition 1				When Discharging	
Total Suspended Solids			15.0	30.0	1/Year when discharging	Grab
Oil and Grease			15.0	20.0	1/Year when discharging	Grab

NPDES Permit No. IL0000108

Effluent Limitations and Monitoring

From the effective date of this permit until the expiration date, the effluent of the following discharge(s) shall be monitored and limited at all times as follows:

	LOAD LIMITS lbs/day DAF (DMF)		CONCENTRATION LIMITS mg/l			
PARAMETER	30 DAY AVERAGE	DAILY MAXIMUM	30 DAY AVERAGE	DAILY MAXIMUM	SAMPLE FREQUENCY	SAMPLE TYPE
Outfall B01: Raw Water Treatment and Demineralizer Regenerant Wastes (DAF = 0.39 MGD)						
This discharge consists of 1. Raw Water Treatment and Demineralizer Regenerant Wastes 2. Chemical Containment Area Drains			Approximate Flow: 0.39 MGD Intermittent			
Flow (MGD)	See Special Condition 1				2/Month	
Total Suspended Solids			15.0	30.0	2/Month	8-Hour Composite
Oil and Grease			15.0	20.0	2/Month	Grab

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Effluent Limitations and Monitoring

From the effective date of this permit until the expiration date, the effluent of the following discharge(s) shall be monitored and limited at all times as follows:

	LOAD LIMITS lbs/day DAF (DMF)		CONCENTRATION LIMITS mg/l			
PARAMETER	30 DAY AVERAGE	DAILY MAXIMUM	30 DAY AVERAGE	DAILY MAXIMUM	SAMPLE FREQUENCY	SAMPLE TYPE
Outfalls: C01 Unit 1 Floor Drains/Sumps and Stormwater (Intermittent Discharge) E01 Unit 2 Floor Drains/Sumps and Stormwater (Intermittent Discharge)						
Flow (MGD)	See Special Condition 1				2/Month	24-Hour Total
Total Suspended Solids			15.0	30.0	2/Month	8-Hour Composite
Oil and Grease			15.0	20.0	2/Month	Grab

Stormwater shall be managed in accordance with special condition 16.

NPDES Permit No. IL0000108

Effluent Limitations and Monitoring

From the effective date of this permit until the expiration date, the effluent of the following discharge(s) shall be monitored and limited at all times as follows:

	LOAD LIMITS lbs/day DAF (DMF)		CONCENTRATION LIMITS mg/l			
PARAMETER	30 DAY AVERAGE	DAILY MAXIMUM	30 DAY AVERAGE	DAILY MAXIMUM	SAMPLE FREQUENCY	SAMPLE TYPE
Outfall D01: Sanitary (DAF = 0.0085 MGD)						
Flow (MGD)	See Special Condition 1				2/Month	
pH	See Special Condition 14				2/Month	Grab
BOD_5			30	60	2/Month	8-Hour Composite
Total Suspended Solids			30	60	2/Month	8-Hour Composite
Total Residual Chlorine				0.05	Daily When Chlorinating	Grab
Fecal Coliform			Monitoring Only		2/Month	Grab

All samples for total residual chlorine (TRC) shall be analyzed by an applicable method contained in 40 CFR 136, equivalent in accuracy to low-level amperometric titration. Any analytical variability of the method used shall be considered when determining the accuracy and precision of the results obtained.

NPDES Permit No. IL0000108

Effluent Limitations and Monitoring

From the effective date of this permit until the expiration date, the effluent of the following discharge(s) shall be monitored and limited at all times as follows:

	LOAD LIMITS lbs/day DAF (DMF)		CONCENTRATION LIMITS mg/l			
PARAMETER	30 DAY AVERAGE	DAILY MAXIMUM	30 DAY AVERAGE	DAILY MAXIMUM	SAMPLE FREQUENCY	SAMPLE TYPE
Outfall G01: Equalization Tank Bypass Line Discharge (Intermittent Discharge)						
Flow (MGD)	See Special Condition 1				Daily When Discharging	
Total Suspended Solids			15.0	30.0	Daily When Discharging	8-Hour Composite
Oil and Grease			15.0	20.0	Daily When Discharging	Grab

The Permittee shall restrict the use of the bypass of the equalization tank to required maintenance of the tank and once bypassing commences such maintenance shall be promptly undertaken to minimize the length of time of bypass of the equalization tank.

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Effluent Limitations and Monitoring

From the effective date of this permit until the expiration date, the effluent of the following discharge(s) shall be monitored and limited at all times as follows:

	LOAD LIMITS lbs/day DAF (DMF)		CONCENTRATION LIMITS mg/l			
PARAMETER	30 DAY AVERAGE	DAILY MAXIMUM	30 DAY AVERAGE	DAILY MAXIMUM	SAMPLE FREQUENCY	SAMPLE TYPE
Outfall J01: Chemical Metal Cleaning Wastes (Intermittent Discharge)						
Flow (MGD)	See Special Condition 1				Daily When Discharging	
pH	See Special Condition 14				Daily When Discharging	Grab
Total Suspended Solids			15.0	30.0	Daily When Discharging	Grab
Oil and Grease			15.0	20.0	Daily When Discharging	Grab
Iron			1.0	1.0	Daily When Discharging	Grab
Copper			0.5	1.0	Daily When Discharging	Grab

Chemical metal cleaning wastes which meet the limits specified above may also be placed on an active area of the coal pile for evaporation in an operating boiler. See Special Condition 12.

NPDES Permit No. IL0000108

Effluent Limitations and Monitoring

From the effective date of this permit until the expiration date, the effluent of the following discharge(s) shall be monitored and limited at all times as follows:

	LOAD LIMITS lbs/day DAF (DMF)		CONCENTRATION LIMITS mg/l			
PARAMETER	30 DAY AVERAGE	DAILY MAXIMUM	30 DAY AVERAGE	DAILY MAXIMUM	SAMPLE FREQUENCY	SAMPLE TYPE
Outfall 002: Coal Yard Settling Pond and Emergency Overflow Discharge (Intermittent Discharge)						
This discharge consists of:				Approximate Flow:		
1. Stormwater runoff from the coal yard and southwest plant yard area				Intermittent		
2. Raw water treatment plant wastes				0.06 MGD		
3. Coal crusher house sump pit discharge				0.42 MGD		
4. Ash dewatering bin overflows				Intermittent		
5. Tractor shed oil/water separator				0.005 MGD		
6. Coal recovery pond effluent				Intermittent		
7. Recycled pond level control*				Intermittent		
8. Ultrasonic resin cleaner backwash				0.01 MGD		
9. Coal unloading septic system				0.0002 MGD		
10. Fuel unloading oil/water separator				Intermittent		
11. Tripper room floor drains				0.003 MGD		
12. Limestone runoff pond emergency overflow				Intermittent		
13. Warehouse/maintenance shop oil/water separator				Intermittent		
Flow (MGD)	See Special Condition 1				1/Week	
pH	See Special Condition 2				1/Week	Grab
Total Suspended Solids			15.0	30.0	1/Week	24-Hour Composite
Oil and Grease			15.0	20.0	1/Week	Grab
Iron			2.0	4.0	1/Quarter	8-Hour Composite

*Emergency overflow from the recycle pond may be directed to outfall 001.

Effluent Limitations and Monitoring

From the effective date of this permit until the expiration date, the effluent of the following discharge(s) shall be monitored and limited at all times as follows:

Outfall 003: Intake Screen Backwash (Intermittent Discharge)

Debris collected on intake screens is prohibited from being discharged back to the Lake. Debris does not include living fish or other living aquatic organisms.

Effluent Limitations and Monitoring

From the effective date of this permit until the expiration date, the effluent of the following discharge(s) shall be monitored and limited at all times as follows:

Outfalls: 008, 009, 010, 011, 012, 013, 014, and 016 Stormwater Runoff from Rail Spur (Intermittent Discharge)
018 Stormwater Runoff Associated with the Ash Landfill (Intermittent Discharge)
H01 Stormwater from Southwest Corner of Closed Ash Pond (Intermittent Discharge)
I01 Stormwater from Southwest Corner of Closed Ash Pond (Intermittent Discharge)
023 WFGD Reclaim Pond Emergency Overflow (Intermittent Discharge)

See Special Condition 16.

Special Conditions

SPECIAL CONDITION 1. Flow shall be measured in units of Million Gallons per Day (MGD) and reported as a monthly average and a daily maximum value on the monthly Discharge Monitoring Report.

SPECIAL CONDITION 2. The pH shall be in the range 6.5 to 9.0. The monthly minimum and monthly maximum values shall be reported on the DMR form.

SPECIAL CONDITION 3. Total Residual Chlorine limit is an instantaneous maximum limit which shall not be exceeded at any time.

a. Chlorine may not be discharged from each unit's main cooling condensers for more than two hours in any one day.

b. A minimum of three grab samples shall be taken at approximately two minute intervals at a point in the discharge flume during the respective chlorination period of each unit allowing for lag time between the initiation of chlorination and the point of sampling before the first grab sample is taken. The individual values of total residual chlorine for each chlorination period sampled shall be reported. The highest individual TRC value for the month should be reported as the maximum value on the Discharge Monitoring Report (DMR). The time and duration of the chlorine dosing period plus the amount of chlorine applied shall be included with the monthly DMR.

c. Continuous analyzers may be substituted for the above grab sampling method. When continuous analyzers are used, calculations submitted with the Discharge Monitoring Reports (DMRs) will be based on the data collected on the first and third Wednesday of the calendar month. In the event of an analyzer malfunction on the above days, data will be collected on the following Wednesday by either an analyzer or by use of the grab sampling method. Discharge Monitoring and Reporting requirements are specified above.

SPECIAL CONDITION 4. The limitations in this Special Condition are incorporated pursuant to Section 316(a) of the Clean Water Act, and relief granted by the Illinois Pollution Control Board. The following specific thermal limitations adopted through IPCB Order 09-38 pursuant to 35 Ill. Adm. Code 302.211(j) shall apply at the edge of the mixing zone for the condenser cooling water discharge. The edge of the mixing zone shall be a maximum area of 26 acres and compliance with the following thermal limitations determined by a fixed temperature recorder set at the edge of the mixing zone below the surface of the water.

A. The thermal discharge to Coffeen Lake from Coffeen Power Station, located in Montgomery County, shall not result in a temperature, measured at the outside edge of the mixing zone in Coffeen Lake, which:

    1. Exceeds 105 degrees Fahrenheit as a monthly average, from June through September, and a 112 degrees Fahrenheit as a maximum for more than three percent of the hours during that same period.

    2. Exceeds 89 degrees Fahrenheit as a monthly average, from November through April, and 94 degrees Fahrenheit as a maximum for more than two percent of the hours during that same period.

    3. Exceed 96 degrees Fahrenheit as a monthly average, in each of the months of May and October, and 102 degrees Fahrenheit as a maximum for more than two percent of the hours in each of those same months.

B. The permittee must monitor Coffeen Lake during the period May through October for fish mortality. In the event excessive fish mortality occurs during these months, Illinois Power Generating Company shall implement appropriate mitigation measures including the following:

    1. Notify the Illinois Department of Natural Resources (IDNR) immediately;

    2. Maximize operation of the cooling basin and existing cooling towers to reduce thermal temperatures;

    3. Make operation revisions to the station’s typical dispatch order (e.g. “last on and first off”);

    4. Reduce nighttime capacity factors;

    5. Monitor intake and discharge temperatures and visually inspect intake and discharge areas; and

    6. No later than November 15 of each year, document mitigation measures employed during periods of excessive fish mortality.

C. Pursuant to 35 Ill. Adm. Code 302.211(j)(1), all discharges from Coffeen Lake to other waters of the State must comply with the applicable provisions of 35 Ill. Adm. Code 302.211(b) through (e).

D. Pursuant to 35 Ill. Adm. Code 302.211(j)(2), the heated effluent discharges to Coffeen Lake must comply with all applicable provisions of 35 Ill. Adm. Code Subtitle C, Chapter I, except 35 Ill. Adm. Code 302.211 (b) through (e).

The maximum instantaneous temperature recorded during a day shall be reported as the daily maximum temperature on the DMR form. The monthly average temperature shall be reported as the monthly average on the DMR form. The number of hours the temperature exceeds the maximum temperature limitation shall be reported in the comment section of the DMR form.

Special Conditions

E. Monitoring: The Permittee shall continue to study Coffeen Lake annually from May through October using the methods and study designs from the 2010-2012 Eastern Illinois University studies, to monitor the health of sportfish populations and potentially detect any population level changes in age/growth, condition, density, and mortality of the Representative Important Species (RIS) study organisms. In addition to the continuation of sportfish studies outlined above, the selection of study organisms shall be expanded or modified to include fish from additional RIS categories. Recommended RIS categories include a thermally sensitive species (white and black crappie are currently studied as sportfish, but would be suitable organisms for this RIS category), a species necessary in the food chain (e.g., gizzard shad or another important lower trophic level species), and a species potentially capable of becoming a localized nuisance (e.g., common carp or any invasive species of concern).

F. The permittee shall submit a revised 316(a) Demonstration study plan 60 days from the effective date of the permit to submit this study plan and shall begin fulfillment of the study plan immediately following Agency approval.

G. The permittee shall comply with 35 Ill. Adm. Code Part 106.1180 when filling the renewal application.

SPECIAL CONDITION 5. Samples taken in compliance with the effluent monitoring requirements shall be taken at a point representative of the discharge, but prior to entry into the receiving stream.

SPECIAL CONDITION 6. The Permittee shall record monitoring results on Discharge Monitoring Report (DMR) Forms using one such form for each outfall each month.

In the event that an outfall does not discharge during a monthly reporting period, the DMR Form shall be submitted with no discharge indicated.

The Permittee may choose to submit NetDMR instead of mailing paper DMRs to the IEPA. More information, including registration information for the NetDMR program, can be obtained on the IEPA website, http://www.epa.state.il.us/water/net-dmr/index.

The completed Discharge Monitoring Report forms shall be submitted to IEPA no later than the 28th day of the following month, unless otherwise specified by the permitting authority.

Permittees not using NetDMRs shall mail Discharge Monitoring Reports with an original signature to the IEPA at the following address:

Illinois Environmental Protection Agency
Division of Water Pollution Control
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276

Attention: Compliance Assurance Section, Mail Code # 19

SPECIAL CONDITION 7. In the event that the permittee shall require the use of water treatment additives, the permittee must request a change in this permit in accordance with the Standard Conditions -- Attachment H.

SPECIAL CONDITION 8. If an applicable effluent standard or limitation is promulgated under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the Clean Water Act and that effluent standard or limitation is more stringent than any effluent limitation in the permit or controls a pollutant not limited in the NPDES Permit, the Agency shall revise or modify the permit in accordance with the more stringent standard or prohibition and shall so notify the permittee.

SPECIAL CONDITION 9. The use or operation of this facility shall be by or under the supervision of a Certified Class K operator.

SPECIAL CONDITION 10. Cooling Water Intake Structure. Based on available information, the Agency has determined that the operation of the cooling water intake structure meets the equivalent of Best Technology Available (BTA) in accordance with the Best Professional Judgment provisions of 40 CFR 125.3 and 40 CFR 125.90(b), based on information available at the time of permit reissuance.

However, the Permittee shall comply with the requirements of the Cooling Water Intake Structure Existing Facilities Rule as found at 40 CFR 122 and 125. Any application materials and submissions required for compliance with the Existing Facilities Rule, shall be submitted to the Agency no later than 4 years from the effective date of this permit.

If for any reason, the Cooling Water Intake Structure Existing Facilities Rule is stayed or remanded by the courts, the Permittee shall comply with the requirements below. The information required below is necessary to further evaluate cooling water intake structure operations based on the most up to date information, in accordance with the Best Professional Judgment provisions of 40 CFR 125.3 and 40 CFR 125.90(b), in existence prior to the effective date of the new Existing Facilities Rule:

Special Conditions

A. The permittee shall submit the following information/studies within 4 years of the effective date of the permit:

1. Source Water Physical Data to include:

   a. A narrative description and scaled drawings showing the physical configuration of all source water bodies used by the facility including aerial dimensions, depths, salinity and temperature regimes;

   b. Identification and characterization of the source waterbody's hydrological and geomorphological features, as well as the methods used to conduct any physical studies to determine the intake's area of influence and the results of such studies; and

   c. Location maps.

2. Source Waterbody Flow Information

   The permittee shall provide the annual mean flow of the waterbody, any supporting documentation and engineering calculations to support the analysis of whether the design intake flow is greater than five percent of the mean annual flow of the river or stream for purposes of determining applicable performance standards. Representative historical data (from a period of time up to 10 years) shall be used, if available.

3. Impingement Mortality and Entrainment Characterization Study

   The permittee shall submit an Impingement Mortality and Entrainment Characterization Study whose purpose is to provide information to support the development of a calculation baseline for evaluating impingement mortality and entrainment and to characterize current impingement mortality and entrainment. The Study shall include the following in sufficient detail to support establishment of baseline conditions:

   a. Taxonomic identification of all life stages of fish and shellfish and any species protected under Federal, State, or Tribal law (including threatened or endangered species) that are in the vicinity of the cooling water intake structure(s) and are susceptible to impingement and entrainment;

   b. A characterization of all life stages of fish and shellfish, and any species protected under Federal, or State law, including a description of the abundance and temporal and spatial characteristics in the vicinity of the cooling water intake structure(s). These may include historical data that are representative of the current operation of the facility and of biological conditions at the site; and

   c. Documentation of the current impingement mortality and entrainment of all life stages of fish, shellfish, and any species protected under Federal , State, or Tribal Law (including threatened or endangered species) and an estimate of impingement mortality and entrainment to be used as the calculation baseline. The documentation may include historical data that are representative of the current operation of the facility and of biological conditions at the site. Impingement mortality and entrainment samples to support the calculations required must be collected during periods of representative operational flows for the cooling water intake structure and the flows associated with the samples must be documented.

B. The permittee shall comply with the following requirements:

1. At all times properly operate and maintain the intake equipment as demonstrated in the application material supporting the BTA determination.

2. Inform IEPA of any proposed changes to the cooling water intake structure or proposed changes to operations at the facility that affect impingement mortality and/or entrainment.

3. Debris collected on intake screens is prohibited from being discharged back to the canal. Debris does not include living fish or other living aquatic organisms.

4. Compliance Alternatives. The permittee must evaluate each of the following alternatives for establishing best technology available for minimizing adverse environmental impacts at the facility due to operation of the intake structure:

   a. Evaluate operational procedures and/or propose facility modifications to reduce the intake through-screen velocity to less than 0.5 ft/sec. The operational evaluation may consider modified circulating water pump operation; reduced flow associated with capacity utilization, recalculation or determination of actual total water withdrawal capacity. The evaluation report and any implementation plan for the operational changes and/ or facility modification shall be submitted to the Agency with the renewal application for this permit.

Special Conditions

b. Complete a fish impingement and entrainment mortality minimization alternatives evaluation. The evaluation may include an assessment of modification of the traveling screens, consideration of a separate fish and debris return system and include time frames and cost analysis to implement these measures. The evaluation report and implementation plan for any operational changes and/ or facility modifications shall be submitted to the Agency with the renewal application for this permit.

C. All required reports shall be submitted to the Industrial Unit, Permit Section and Compliance Assurance Section at the address in special condition 6.

This special condition does not relieve the permittee of the responsibility of complying with any other laws, regulations, or judicial orders issued pursuant to Section 316(b) of the Clean Water Act.

SPECIAL CONDITION 11. There shall be not discharge of polychlorinated biphenyl compounds.

SPECIAL CONDITION 12. Chemical metal cleaning wastes may be placed on an active area of the coal pile for evaporation in an operating boiler provided a demonstration showing BAT equivalency is submitted to the IEPA within 90 days following completion of treatment. The Permittee shall monitor coal pile runoff for concentrations of copper (total) and iron (total) a minimum of 4 times prior to placing chemical metal cleaning wastes on the coal pile. The Permittee shall monitor the coal pile for coal pile runoff following the placement of chemical metal cleaning wastes on the coal pile. Upon placement of the wastes on the coal pile, for each placement which causes an effluent from the coal pile and each rainfall event which produces coal pile runoff during 30 days following placement on the coal pile, a representative grab sample shall be taken daily of the discharge and analyzed for iron (total) and copper (total). The analysis report shall include the frequency, duration and amounts of the month's precipitation events.

SPECIAL CONDITION 13. The Agency has determined that the effluent limitations for outfall 002 constitute BAT/BCT for storm water which is treated in the existing treatment facilities for purposes of this permit reissuance, and no pollution prevention plan will be required for such storm water. In addition to the chemical specific monitoring required elsewhere in this permit, the permittee shall conduct an annual inspection of the facility site to identify areas contributing to a storm water discharge associated with industrial activity, and determine whether any facility modifications have occurred which result in previously-treated storm water discharges no longer receiving treatment. If any such discharges are identified the permittee shall request a modification of this permit within 30 days after the inspection. Records of the annual inspection shall be retained by the permittee for the term of this permit and be made available to the Agency on request.

SPECIAL CONDITION 14. The pH shall be in the range 6.0 to 9.0. The monthly minimum and monthly maximum values shall be reported on the DMR form.

SPECIAL CONDITION 15. The Permittee shall monitor the effluent from outfalls 001, 009, 010, 011, 012, 013, 014, 016, 018, 020, 021, 022 on a semi-annual basis and outfalls 002 and 008 on an annual basis for the following parameters. This Permit may be modified with public notice to establish effluent limitations if appropriate, based on information obtained through sampling. The sample shall be a 24-hour effluent composite except as otherwise specifically provided below and the results shall be submitted to the address in special condition 6 in June and December. The parameters to be sampled and the minimum reporting limits to be attained are as follows:

STORET CODE	PARAMETER	Minimum reporting limit
01002	Arsenic	0.05 mg/L
01007	Barium	0.5 mg/L
01027	Cadmium	0.001 mg/L
00940	Chloride	1.0 mg/l
01032	Chromium (hexavalent) (grab)	0.01 mg/L
01034	Chromium (total)	0.05 mg/L
01042	Copper	0.005 mg/L
00718	Cyanide (grab) (weak acid dissociable)	5.0 ug/L
00720	Cyanide (grab not to exceed 24 hours) (total)	5.0 ug/L
00951	Fluoride	0.1 mg/L
01045	Iron (total)	0.5 mg/L
01046	Iron (Dissolved)	0.5 mg/L
01051	Lead	0.05 mg/L
01055	Manganese	0.5 mg/L
71900	Mercury (grab)**	1.0 ng/L*
01067	Nickel	0.005 mg/L
00556	Oil (hexane soluble or equivalent) (Grab Sample only)	5.0 mg/L
32730	Phenols (grab)	0.005 mg/L
01147	Selenium	0.005 mg/L
00945	Sulfate	1.0 mg/l
01077	Silver (total)	0.003 mg/L

Special Conditions

01092	Zinc	0.025 mg/L

Unless otherwise indicated, concentrations refer to the total amount of the constituent present in all phases, whether solid, suspended or dissolved, elemental or combined, including all oxidation states.

*1.0 ng/L = 1 part per trillion.
**Utilize USEPA Method 1631E and the digestion procedure described in Section 11.1.1.2 of 1631E.

Outfalls 001, 020, 021, and 022 are the same water and only one sample is required from any of these outfalls.

Outfalls 008 -018 may be grab sampled instead of a 24-hour effluent composite.

SPECIAL CONDITION 16.

STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

A. A storm water pollution prevention plan shall be maintained by the permittee for the storm water associated with industrial activity at this facility except that which is discharged from outfall 002. The plan shall identify potential sources of pollution which may be expected to affect the quality of storm water discharges associated with the industrial activity at the facility. In addition, the plan shall describe and ensure the implementation of practices which are to be used to reduce the pollutants in storm water discharges associated with industrial activity at the facility and to assure compliance with the terms and conditions of this permit. The permittee shall modify the plan if substantive changes are made or occur affecting compliance with this condition.

1. Waters not classified as impaired pursuant to Section 303(d) of the Clean Water Act.

   Unless otherwise specified by federal regulation, the storm water pollution prevention plan shall be designed for a storm event equal to or greater than a 25-year 24-hour rainfall event.

2. Waters classified as impaired pursuant to Section 303(d) of the Clean Water Act

   For any site which discharges directly to an impaired water identified in the Agency's 303(d) listing, and if any parameter in the subject discharge has been identified as the cause of impairment, the storm water pollution prevention plan shall be designed for a storm event equal to or greater than a 25-year 24-hour rainfall event. If required by federal regulations, the storm water pollution prevention plan shall adhere to a more restrictive design criteria.

B. The operator or owner of the facility shall make a copy of the plan available to the Agency at any reasonable time upon request.

Facilities which discharge to a municipal separate storm sewer system shall also make a copy available to the operator of the municipal system at any reasonable time upon request.

C. The permittee may be notified by the Agency at any time that the plan does not meet the requirements of this condition. After such notification, the permittee shall make changes to the plan and shall submit a written certification that the requested changes have been made. Unless otherwise provided, the permittee shall have 30 days after such notification to make the changes.

D. The discharger shall amend the plan whenever there is a change in construction, operation, or maintenance which may affect the discharge of significant quantities of pollutants to the waters of the State or if a facility inspection required by paragraph H of this condition indicates that an amendment is needed. The plan should also be amended if the discharger is in violation of any conditions of this permit, or has not achieved the general objective of controlling pollutants in storm water discharges. Amendments to the plan shall be made within 30 days of any proposed construction or operational changes at the facility, and shall be provided to the Agency for review upon request.

E. The plan shall provide a description of potential sources which may be expected to add significant quantities of pollutants to storm water discharges, or which may result in non-storm water discharges from storm water outfalls at the facility. The plan shall include, at a minimum, the following items:

1. A topographic map extending one-quarter mile beyond the property boundaries of the facility, showing: the facility, surface water bodies, wells (including injection wells), seepage pits, infiltration ponds, and the discharge points where the facility's storm water discharges to a municipal storm drain system or other water body. The requirements of this paragraph may be included on the site map if appropriate. Any map or portion of map may be withheld for security reasons.

2. A site map showing:

   i. The storm water conveyance and discharge structures;

   ii. An outline of the storm water drainage areas for each storm water discharge point;

iii. Paved areas and buildings;

iv. Areas used for outdoor manufacturing, storage, or disposal of significant materials, including activities that generate significant quantities of dust or particulates.

v. Location of existing storm water structural control measures (dikes, coverings, detention facilities, etc.);

vi. Surface water locations and/or municipal storm drain locations

vii. Areas of existing and potential soil erosion;

viii. Vehicle service areas;

ix. Material loading, unloading, and access areas.

x. Areas under items iv and ix above may be withheld from the site for security reasons.

3. A narrative description of the following:

i. The nature of the industrial activities conducted at the site, including a description of significant materials that are treated, stored or disposed of in a manner to allow exposure to storm water;

ii. Materials, equipment, and vehicle management practices employed to minimize contact of significant materials with storm water discharges;

iii. Existing structural and non-structural control measures to reduce pollutants in storm water discharges;

iv. Industrial storm water discharge treatment facilities;

v. Methods of onsite storage and disposal of significant materials.

4. A list of the types of pollutants that have a reasonable potential to be present in storm water discharges in significant quantities. Also provide a list of any pollutant that is listed as impaired in the most recent 303(d) report.

5. An estimate of the size of the facility in acres or square feet, and the percent of the facility that has impervious areas such as pavement or buildings.

6. A summary of existing sampling data describing pollutants in storm water discharges.

F. The plan shall describe the storm water management controls which will be implemented by the facility. The appropriate controls shall reflect identified existing and potential sources of pollutants at the facility. The description of the storm water management controls shall include:

1. Storm Water Pollution Prevention Personnel - Identification by job titles of the individuals who are responsible for developing, implementing, and revising the plan.

2. Preventive Maintenance - Procedures for inspection and maintenance of storm water conveyance system devices such as oil/water separators, catch basins, etc., and inspection and testing of plant equipment and systems that could fail and result in discharges of pollutants to storm water.

3. Good Housekeeping - Good housekeeping requires the maintenance of clean, orderly facility areas that discharge storm water. Material handling areas shall be inspected and cleaned to reduce the potential for pollutants to enter the storm water conveyance system.

4. Spill Prevention and Response - Identification of areas where significant materials can spill into or otherwise enter the storm water conveyance systems and their accompanying drainage points. Specific material handling procedures, storage requirements, spill clean up equipment and procedures should be identified, as appropriate. Internal notification procedures for spills of significant materials should be established.

5. Storm Water Management Practices - Storm water management practices are practices other than those which control the source of pollutants. They include measures such as installing oil and grit separators, diverting storm water into retention basins, etc. Based on assessment of the potential of various sources to contribute pollutants, measures to remove pollutants from storm water discharge shall be implemented. In developing the plan, the following management practices shall be considered:

i. Containment - Storage within berms or other secondary containment devices to prevent leaks and spills from entering storm water runoff. To the maximum extent practicable storm water discharged from any area where

material handling equipment or activities, raw material, intermediate products, final products, waste materials, by-products, or industrial machinery are exposed to storm water should not enter vegetated areas or surface waters or infiltrate into the soil unless adequate treatment is provided.

ii. Oil & Grease Separation - Oil/water separators, booms, skimmers or other methods to minimize oil contaminated storm water discharges.

iii. Debris & Sediment Control - Screens, booms, sediment ponds or other methods to reduce debris and sediment in storm water discharges.

iv. Waste Chemical Disposal - Waste chemicals such as antifreeze, degreasers and used oils shall be recycled or disposed of in an approved manner and in a way which prevents them from entering storm water discharges.

v. Storm Water Diversion - Storm water diversion away from materials manufacturing, storage and other areas of potential storm water contamination. Minimize the quantity of storm water entering areas where material handling equipment of activities, raw material, intermediate products, final products, waste materials, by-products, or industrial machinery are exposed to storm water using green infrastructure techniques where practicable in the areas outside the exposure area, and otherwise divert storm water away from exposure area.

vi. Covered Storage or Manufacturing Areas - Covered fueling operations, materials manufacturing and storage areas to prevent contact with storm water.

vii. Storm Water Reduction - Install vegetation on roofs of buildings within adjacent to the exposure area to detain and evapotranspirate runoff where precipitation falling on the roof is not exposed to contaminants, to minimize storm water runoff; capture storm water in devices that minimize the amount of storm water runoff and use this water as appropriate based on quality.

6. Sediment and Erosion Prevention - The plan shall identify areas which due to topography, activities, or other factors, have a high potential for significant soil erosion. The plan shall describe measures to limit erosion.

7. Employee Training - Employee training programs shall inform personnel at all levels of responsibility of the components and goals of the storm water pollution control plan. Training should address topics such as spill response, good housekeeping and material management practices. The plan shall identify periodic dates for such training.

8. Inspection Procedures - Qualified plant personnel shall be identified to inspect designated equipment and plant areas. A tracking or follow-up procedure shall be used to ensure appropriate response has been taken in response to an inspection. Inspections and maintenance activities shall be documented and recorded.

G. Non-Storm Water Discharge - The plan shall include a certification that the discharge has been tested or evaluated for the presence of non-storm water discharge. The certification shall include a description of any test for the presence of non-storm water discharges, the methods used, the dates of the testing, and any onsite drainage points that were observed during the testing. Any facility that is unable to provide this certification must describe the procedure of any test conducted for the presence of non-storm water discharges, the test results, potential sources of non-storm water discharges to the storm sewer, and why adequate tests for such storm sewers were not feasible.

H. Quarterly Visual Observation of Discharges - The requirements and procedures of quarterly visual observations are applicable to all outfalls covered by this condition.

1. You must perform and document a quarterly visual observation of a storm water discharge associated with industrial activity from each outfall. The visual observation must be made during daylight hours. If no storm event resulted in runoff during daylight hours from the facility during a monitoring quarter, you are excused from the visual observations requirement for that quarter, provided you document in your records that no runoff occurred. You must sign and certify the document.

2. Your visual observation must be made on samples collected as soon as practical, but not to exceed 1 hour or when the runoff or snow melt begins discharging from your facility. All samples must be collected from a storm event discharge that is greater than 0.1 inch in magnitude and that occurs at least 72 hours from the previously measureable (greater than 0.1 inch rainfall) storm event. The observation must document: color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution. If visual observations indicate any unnatural color, odor, turbidity, floatable material, oil sheen or other indicators of storm water pollution, the permittee shall obtain a sample and monitor for the parameter or the list of pollutants in Part E.4.

3. You must maintain your visual observation reports onsite with the SWPPP. The report must include the observation date and time, inspection personnel, nature of the discharge (i.e., runoff or snow melt), visual quality of the storm water

discharge (including observations of color, odor, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution), and probable sources of any observed storm water contamination.

4. You may exercise a waiver of the visual observation requirement at a facility that is inactive or unstaffed, as long as there are no industrial materials or activities exposed to storm water. If you exercise this waiver, you must maintain a certification with your SWPPP stating that the site is inactive and unstaffed, and that there are no industrial materials or activities exposed to storm water.

5. Representative Outfalls - If your facility has two or more outfalls that you believe discharge substantially identical effluents, based on similarities of the industrial activities, significant materials, size of drainage areas, and storm water management practices occurring within the drainage areas of the outfalls, you may conduct visual observations of the discharge at just one of the outfalls and report that the results also apply to the substantially identical outfall(s).

6. The visual observation documentation shall be made available to the Agency and general public upon written request.

I. The permittee shall conduct an annual facility inspection to verify that all elements of the plan, including the site map, potential pollutant sources, and structural and non-structural controls to reduce pollutants in industrial storm water discharges are accurate. Observations that require a response and the appropriate response to the observation shall be retained as part of the plan. Records documenting significant observations made during the site inspection shall be submitted to the Agency in accordance with the reporting requirements of this permit.

J. This plan should briefly describe the appropriate elements of other program requirements, including Spill Prevention Control and Countermeasures (SPCC) plans required under Section 311 of the CWA and the regulations promulgated thereunder, and Best Management Programs under 40 CFR 125.100.

K. The plan is considered a report that shall be available to the public at any reasonable time upon request.

L. The plan shall include the signature and title of the person responsible for preparation of the plan and include the date of initial preparation and each amendment thereto.

M. Facilities which discharge storm water associated with industrial activity to municipal separate storm sewers may also be subject to additional requirement imposed by the operator of the municipal system

Construction Authorization

Authorization is hereby granted to construct treatment works and related equipment that may be required by the Storm Water Pollution Prevention Plan developed pursuant to this permit.

This Authorization is issued subject to the following condition(s).

N. If any statement or representation is found to be incorrect, this authorization may be revoked and the permittee there upon waives all rights thereunder.

O. The issuance of this authorization (a) does not release the permittee from any liability for damage to persons or property caused by or resulting from the installation, maintenance or operation of the proposed facilities; (b) does not take into consideration the structural stability of any units or part of this project; and (c) does not release the permittee from compliance with other applicable statutes of the State of Illinois, or other applicable local law, regulations or ordinances.

P. Plans and specifications of all treatment equipment being included as part of the stormwater management practice shall be included in the SWPPP.

Q. Construction activities which result from treatment equipment installation, including clearing, grading and excavation activities which result in the disturbance of one acre or more of land area, are not covered by this authorization. The permittee shall contact the IEPA regarding the required permit(s).

REPORTING

R. The facility shall submit an electronic copy of the annual inspection report to the Illinois Environmental Protection Agency. The report shall include results of the annual facility inspection which is required by Part I of this condition. The report shall also include documentation of any event (spill, treatment unit malfunction, etc.) which would require an inspection, results of the inspection, and any subsequent corrective maintenance activity. The report shall be completed and signed by the authorized facility employee(s) who conducted the inspection(s). The annual inspection report is considered a public document that shall be available at any reasonable time upon request.

S. The first report shall contain information gathered during the one year time period beginning with the effective date of coverage under this permit and shall be submitted no later than 60 days after this one year period has expired. Each subsequent report

shall contain the previous year's information and shall be submitted no later than one year after the previous year's report was due.

T. If the facility performs inspections more frequently than required by this permit, the results shall be included as additional information in the annual report.

U. The permittee shall retain the annual inspection report on file at least 3 years. This period may be extended by request of the Illinois Environmental Protection Agency at any time.

Annual inspection reports shall be submitted to the following email and office addresses: epa.npdes.inspection@illinois.gov

Illinois Environmental Protection Agency
Bureau of Water
Compliance Assurance Section
Annual Inspection Report
1021 North Grand Avenue East
Post Office Box 19276

Springfield, Illinois 62794-9276

V. The permittee shall notify any regulated small municipal separate storm sewer owner (MS4 Community) that they maintain coverage under an individual NPDES permit. The permittee shall submit any SWPPP or any annual inspection to the MS4 community upon request by the MS4 community.